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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/160,665 09/25/98 KURIYAMA

K M1866-18

EXAMINER

IM62/0521

MORRISON LAW FIRM  
145 NORTH FIFTH AVENUE  
MOUNT VERNON NY 10550

ELVE, M

ART UNIT

PAPER NUMBER

1725

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05/21/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**09/160,665**

Applicant(s)  
**Kuriyama et al.**

Examiner  
**M. Alexandra Elve**

Art Unit  
**1725**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Apr 4, 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above, claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3- 8, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US Pat. 3,991,929).

Smith teaches coating and bonding of metals. The inside of a titanium sheath is coated with a tinning metal or alloy by heating. The coated sheath is then bonded by, for example, soldering to a metal article such as copper (abstract & col. 1, lines 45-62). It is preferred to use tin itself as the tinning metal. A wide range of tinning alloys may be used. Suitable tinning alloys include binary alloys containing a major proportion of tin and a minor proportion of bismuth, cadmium or zinc; other suitable alloys include ternary tin-containing alloys (col. 2, lines 22-36). The temperature at which the sheath of titanium (or an alloy thereof) may vary over a wide range, but it is generally preferred to use a temperature in the range from 350 to 450°C (col. 2, lines 66-68 & col. 3, lines 1-3). The coating may be enclosed in the sheath and bonding may be carried out

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in a furnace. The sheath is stopped at one end, filled with the tinning metal or alloy and then inserted into the furnace. The sheath and its contents are heated until the tinning metal or alloy is melted. The bonding of the sheath of titanium to another metal, preferably a pretinned electrically conductive metal, such as copper (col. 3, lines 10-40).

Smith does not teach the exact processing temperature or the form of the copper material, that is a foil or a powder as instant claims.

It is well settled that where patentability is predicated upon a change in condition of prior art process, such as temperatures, the change must be at least “critical”, that is, it must lead to a new and unexpected result. The applicant has the burden of providing such proof of criticality. Note In re Aller et al. 105 USPQ 223. Absent proof of such criticality in the present instance, it would have been obvious to one of ordinary skill in the art at the time of the invention to use temperature which melt the tin and titanium/copper eutectic for optimizing the joining of the sheath and its contents.

The method of making a novel and unobvious product or use of a different starting material may be obvious (that is, foils or powders or sheets and so forth) if the method is otherwise the same. *Ex parte Orser* 14 USPQ 2d 1987 (BPAI 1990); *Ex parte Kifer* 5 USPQ 2d 1904 (BPAI 1988); In re Durden 226 USPQ 359 (Fed. Cir. 1985); In re Payne 203 USPQ 245; In re Kanter 158 USPQ 331 (CCPA 1968); In re Hoeksema 141 USPQ 733 (CCPA 1964); In re Larsen 130 USPQ 209 (CCPA 1961); In re Leshin 125 USPQ 416.

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3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over paragraph 4 above and further in view of Kline (US Pat. 4,411,762).

Kline teaches the bonding of titanium on to a copper substrate, with the possible presence of a third material, in order to form an electrode. A eutectoid is formed between the titanium and the copper. The process is conducted in an inert atmosphere. Argon, helium and in some cases nitrogen are suitable inert materials (col. 3, lines 20-33; col. 4, lines 19-28 & 64-68; col. 5, lines 1-23; col. 7, lines 1-7 & 28-50; col. 12, lines 3-13). It would have been obvious to one of ordinary skill in the art to use the processing environments, as taught by Kline to the Smith process because of enhanced bonding due to the negation of contaminants.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Norris (US Pat. 4,715,525).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is (703) 308-0092. The examiner can normally be reached Monday to Friday from 6:30 AM to 3:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn, can be reached on (703) 308-3318. The fax number for the group is (703) 305-3599.

Any inquiry of general nature to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read "M. Alexandra Elve", followed by a long, sweeping horizontal line that extends to the right.

M. Alexandra Elve  
Patent Examiner  
Technology Center 1700

May 17, 2001.